

Notice No.4

Rules and Regulations for the Classification of Naval Ships, January 2017

The status of this Rule set is amended as shown and is now to be read in conjunction with this and prior Notices. Any corrigenda included in the Notice are effective immediately.

Please note that corrigenda amends to paragraphs, Tables and Figures are not shown in their entirety.

Issue date: October 2017

Amendments to	Effective date	Mandatory Instrument
Volume 1, Part 1, Chapter 2, Section 6	Corrigendum	N/A
Volume 1, Part 3, Chapter 5, Sections 4, 7 & 8	Corrigenda	N/A
Volume 2, Part 4, Chapter 2, Section 3	Corrigenda	N/A
Volume 2, Part 4, Chapter 3, Section 4	Corrigenda	N/A
Volume 2, Part 4, Chapter 4, Section 5	Corrigenda	N/A
Volume 2, Part 6, Chapter 1, Section 4	Corrigenda	N/A
Volume 2, Part 7, Chapter 4, Section 2	Corrigendum	N/A
Volume 2, Part 9, Chapter 8, Section 3	Corrigenda	N/A
Volume 2, Part 9, Chapter 11, Section 1	Corrigenda	N/A
Volume 3, Part 2, Chapter 2, Section 2	Corrigenda	N/A

Volume 1, Part 1, Chapter 2

Classification Regulations

■ Section 6

Classification of machinery with [✕]LMC or MCH notation

6.3 Survey and inspection

6.3.3 Acceptance of manufacturer's certificates for items of machinery for propulsion (including propulsion gearing with single input/output arrangements) and for electrical power generation and for other auxiliary machinery for essential services where the [✕] LMC notation is to be assigned, is subject to the following conditions:

Volume 1, Part 3, Chapter 5

Anchoring, Mooring, Towing, Berthing, Launching, Recovery and Docking

■ Section 4

Anchors

4.4 High Holding Power (HHP) type anchors

Table 5.4.1 Equipment – HHP Bower anchors and chain cables

Equipment Number		Equipment Letter	Stockless bower anchors		Total length, in metres	Stud link chain cables for bower anchors		
Exceeding	Not Exceeding		Number	Mass of anchor, in kg		Diameter, in mm		
						Mild steel (Grade 1 or U1)	Special quality steel (Grade U2)	Extra special quality steel (Grade U3)
50	70	A	2	135	220	14	12,5	✕ 12,5
70	90	B	2	180	220	16	14	✕ 14
90	110	C	2	225	247,5	17,5	16	✕ 16
110	130	D	2	360	247,5	19	17,5	✕ 17,5
130	150	E	2	270	275,5	20,5	17,5	✕ 17,5
150	175	F	2	315	275	22	19	✕ 19
175	205	G	2	428	302,5	24	20,5	✕ 20,5
10000	10000	J*	2	23250	770	–	157	137
10700	11500	K*	2	24750	770	–	157	137
11500	12400	L*	2	26625	770	–	162	147

■ Section 7

Towing arrangements

7.2 Application

Table 5.7.1 Equipment – Minimum length and breaking strength of towlines

Equipment number		Not Exceeding Equipment Letter	Towline	
Exceeding	Equipment Letter Not Exceeding		Minimum length, in metres	Minimum strength, in kN Minimum breaking strength, in kN
780	840	T	190	518 479
2080	1130 2230	H†	240	1259
1130 2230	1380 2380	I†	240	1356
1380 2380	2530	J†	240	1453
4000	4000 4200	S†	300	1471
4000 4200	4400	T†	300	1471
4600	5000 4800	V†	300	1471
4800	5000	W†	300	1471
5000	5200	W† X†	300	1471
5500	5500	Y†	300	1471

■ **Section 8**
Windlass and capstan design and testing

8.2 Windlass design

8.2.1 The following performance criteria are to be used as a design basis for the windlass:

- (b) The windlass is to have sufficient power to exert, over a period of at least two minutes, a pull equal to the greater of:
 (ii) anchor breakout pull:

~~$$12,18Wa + \frac{7,0L_c d_c^2}{100} \text{ N}$$~~

$$12,18Wa + \frac{7,0L_c d_c^2}{100} \text{ N}$$

Table 5.8.3 Permissible stress for design load cases

Note 2. Where a component is subjected to a combination of stresses, F_c is the combined stress which is to be calculated as follows:
 Combined bending and tension:

$$F_e = 1,25f_e + f_{bt} \quad F_c = 1,25f_t + f_{bt}$$

Volume 2, Part 4, Chapter 2

Water Jet Systems

■ Section 3

Design requirements

3.7 Nozzle/steering arrangements systems

3.7.2 Where more than one steerable water jet is fitted, *Vol 2, Pt 6, Ch 1, 4.1 General 4.1.2* is considered to be met when:

- (a) Each steerable water jet fulfils the requirements for main steering gear (~~see Vol 2, Pt 4, Ch 2, 3.7 Nozzle/steering arrangements 3.7.3~~ *Vol 2, Pt 4, Ch 2, 3.7 Nozzle/steering systems 3.7.3*), and
- (b) Each steerable water jet is provided with the ability to position and lock the steerable water jet in a neutral position after a failure of its own power unit(s) and actuator(s). These arrangements are to be of sufficient strength to hold the steerable water jet in position at the ship's manoeuvring speed to be taken as not less than 7 knots. ~~Operating instructions~~ *Instructions* displayed at the locking mechanism's operating position are to include a ~~direction directive~~ to inform the bridge of any limitation in ship's speed required as a result of the securing mechanism being activated.

Volume 2, Part 4, Chapter 3

Thrusters

■ Section 4

Design and construction

4.1 General

4.1.1 The arrangement of all types of thrusters is to be such that the ~~craft~~ *vessel* can be manoeuvred in accordance with the design specifications. The operating conditions covered are to include the following:

4.2 Azimuth thrusters

4.2.2 Where more than one azimuth thruster is fitted, *Vol 2, Pt 6, Ch 1, 4.1 General 4.1.2* is considered to be met when:

- (b) Each azimuth thruster is provided with the ability to position and lock the azimuth thruster in a neutral position after a failure of its own power unit(s) and actuator(s). These arrangements are to be of sufficient strength to hold the azimuth thruster in position at the ship's manoeuvring speed to be taken as not less than 7 knots. ~~Operating instructions~~ *Instructions* displayed at the locking mechanism's operating position are to include a ~~direction directive~~ to inform the bridge of any limitation in ship's speed required as a result of the securing mechanism being activated.

4.2.7 Gearing for the azimuthing mechanism is to be designed to a recognised National Standard and the following conditions:

- a static duty (~~$\leq 10^3$~~ $\leq 10^3$ load cycles) steering torque which should be not less than M_T , as defined in *Vol 2, Pt 4, Ch 3, 4.3 Azimuth thrusters with a nozzle 4.3.1*

Volume 2, Part 4, Chapter 4

Podded Propulsion Units

■ Section 5

Machinery design and construction requirements

5.6 Steering system

5.6.3 Where more than one podded propulsion unit is fitted, *Vol 2, Pt 6, Ch 1, 4.1 General 4.1.2* is considered to be met when:

- (a) Each podded propulsion unit is provided the ability to position and lock the podded propulsion unit in a neutral position after a failure of its own power unit(s) and actuator(s). These arrangements are to be of sufficient strength to hold the podded propulsion unit in position at the ship's manoeuvring speed to be taken as not less than 7 knots, *see also Vol 2, Pt 4, Ch 4, 5.3 Propulsion shafting 5.3.11*. ~~Operating instructions~~ *Instructions* displayed at the locking mechanism's operating position are to include a ~~direction directive~~ to inform the bridge of any limitation in ship's speed required as a result of the securing mechanism being activated.

5.6.5 The auxiliary steering gear is to be:

(c) Operated by power for ships having propulsion power of more than 2500 kW per podded propulsion- unit and for all ships, where it is necessary, to meet the requirements of ~~Vol 2, Pt 4, Ch 4, 3.1 General 3.1.3~~ Vol 2, Pt 4, Ch 9, 5.6 Steering system 5.6.5(b).

Volume 2, Part 6, Chapter 1

Steering Gear

■ Section 4

Performance

4.1 General

4.1.3 ~~Main and auxiliary steering gear power units are to be:~~ The main steering gear is to be:

4.2 Performance requirements for rudder-type steering systems

4.2.1 The main steering gear is to be:

- (a) Of adequate strength and capable of putting the rudder over from 35° on one side to 35° on the other side with the ship at its deepest sea-going draught and running ahead at maximum ahead service speed and under the same conditions, from 35° on either side to 30° on the other side in not more than 28 seconds which shall be demonstrated in accordance with ~~Vol 2, Pt 1, Ch 3, 15.4 Testing~~ ~~15.4~~ Vol 2, Pt 1, Ch 3, 16.4 Testing; and

Volume 2, Part 7, Chapter 4 Aircraft/Helicopter/Vehicle Fuel Piping and Arrangements

■ Section 2 Refuelling facilities

2.1 Fuel storage

2.1.10 Cofferdams are to be provided between tanks and spaces containing sources of ignition.

Volume 2, Part 9, Chapter 8 Programmable Electronic Systems

■ Section 3 Verification requirements

3.1 General

3.1.1 Compliance with the requirements in *Vol 2, Pt 9, Ch 8, 4 General requirements* and *Vol 2, Pt 9, Ch 8, 5 Programmable electronic systems*, inclusive is deemed to satisfy the functional requirements and performance requirements above.

Volume 2, Part 9, Chapter 11 Testing and Trials

■ Section 1 Testing and Trials

1.5 Optical Fibre Communication Systems

1.5.3 The tests required by ~~Pt 9, Ch 11, 1 Testing and trials 1.4.1~~ *Pt 9, Ch 11, 1.5 Optical Fibre Communications Systems 1.5.1* and ~~Pt 9, Ch 11, 1 Testing and trials 1.4.2~~ *Pt 9, Ch 11, 1.5 Optical Fibre Communication Systems 1.5.2* are to be repeated after installation using the same method as used for the pre-installation test. The test is to be recorded in accordance with the standard; the documentation is to be retained on board and made available to the Surveyor on request. Acceptance of alternative standards will be

Volume 3, Part 2, Chapter 2

Environmental Protection

■ Section 2 ENV characters

2.5 Emissions of nitrogen oxides – NOx-1, NOx-2, NOx-3 characters

2.5.2 There are no specific requirements relating to NOx emissions from boilers, incinerators or gas turbine installations

Existing paragraphs 2.5.2 to 2.5.9 have been renumbered 2.5.3 to 2.5.10.

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